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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,147	02/07/2002	Tomi Hakkarainen	4208-4027	1454
27123 7590 03/26/2007 MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			EXAMINER DINH, MINH	
			ART UNIT	PAPER NUMBER
			2132	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/26/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/072,147	Applicant(s) HAKKARAINEN ET AL.	
	Examiner Minh Dinh	Art Unit 2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 December 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 and 39-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 and 39-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

1. This action is in response to the amendment filed 12/20/06. Claims 1, 21-22, 25, 33-34 and 39-40 have been amended.

***Response to Arguments***

2. Applicant's arguments, see page 10, filed 12/20/06, with respect to the rejections of claims 2-3 under 35 USC 112, first paragraph as failing to comply with the written description requirement have been fully considered and are persuasive. Therefore, the rejections have been withdrawn.
3. Applicant's arguments, see the second paragraph of page 11, with respect to the rejections of claims 33-34 under 35 USC 112, first paragraph as failing to comply with the enablement requirement have been fully considered and are persuasive. Therefore, the rejections have been withdrawn.
4. Applicant's arguments with respect to claims 1, 21, 25 and 40 (page 12) have been considered but are not persuasive. Applicant's amendments have necessitated a new search and new grounds of rejection.

5. Applicant's arguments (the last paragraph of page 12) with respect to the rejection of claim 39 under 35 USC 102(e) have been fully considered but they are not persuasive. Since claim 39 does not have any limitation regarding transmitting the first decryption information, Raith (6,510,515) anticipates the claim.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. Regarding claim 21, the omitted element is: the transmission channel used for transmitting the service in the last step. There are two different channels being used for data transmission; therefore, a transmission channel must be specified for each transmission. Claims that are not specifically addressed are rejected by virtue of their dependency.

8. Claims 25-36 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. Regarding claim 25, the

omitted step is: receiving the service over a unidirectional channel, wherein the service is encrypted with encryption information corresponding to the second decryption information. Without this receiving step, service cannot be decrypted using the second decryption information. Claims that are not specifically addressed are rejected by virtue of their dependency.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claim 39 is rejected under 35 U.S.C. 102(e) as being anticipated by Raith (6,510,515). Raith discloses a method for controlling access to encrypted broadcast services, comprising: receiving a request for a service from a requestor; authenticating the requestor (col. 12, line 17-67); installing key  $kn$  on a device of the requestor; transmitting the service, encrypted with  $kn$ , over a unidirectional channel; generating key  $kn+1$ , for use in decrypting the service at a later time; transmitting key  $kn+1$  over the

unidirectional channel; and transmitting the service encrypted with key  $kn+1$  over the unidirectional channel (Abstract; fig. 7; col. 10, line 64 – col. 11, line 26).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-8, 11, 13-27, 29-36 and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (4,484,027) in view of Wasilewski et al. (6,516,412). Lee discloses a method for key distribution in a conditional access system (Abstract; figure).

Regarding claims 1-7, 11, 16-19, 21-27, 32, 35-36 and 39-41, Lee specifically discloses a method comprising: transmitting first decryption information (i.e., a monthly key) to a requestor over a unidirectional channel wherein the first decryption information decrypts the service (col. 3, lines 17-31, 54-67; col. 7, lines 1-10); transmitting the service, encrypted with encryption information corresponding to the first decryption information (i.e., a pseudo-random sequence based on the monthly key and a random

number associated with the current period, the random number being changed periodically), over a unidirectional channel (col. 3, lines 32-49); generating second decryption information for use in decrypting the service (i.e., a new random number for the next period); transmitting the second decryption information over the unidirectional channel wherein the second decryption information decrypts the service (col. 3, lines 50-53; col. 4, lines 1-10); and transmitting the service, encrypted with encryption information corresponding to the second decryption information (i.e., a pseudo-random sequence based on the monthly key and the new random number) rather than with encryption information corresponding to the first decryption information, over the unidirectional channel (col. 3; lines 32-49).

Lee does not disclose utilizing a bi-directional channel together with the unidirectional channel in the conditional access system. Specifically, Lee does not disclose receiving a request for a service from a requestor over a bi-directional channel; authenticating the requestor using information from the request, and transmitting the monthly key to the requestor over the bi-directional channel. Wasilewski discloses a conditional access system that utilizes both a unidirectional channel and a bi-directional channel (Abstract; figure 6). Specifically, Wasilewski discloses receiving a request for a service from a requestor over a bi-directional channel (col. 31, lines 25-63; col. 34, lines 1-12); authenticating the requestor using information from the request

(col. 12, line 44 – col. 13, line 9; col. 34, lines 13-44) and transmitting a monthly key to the requestor over the bi-directional channel (col. 4, line 63 – col. 5, line 12; col. 6, lines 25-61; col. 16, line 63 – col. 17, line 13; col. 38, lines 12-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Wasilewski's utilization of a bi-directional channel into Lee's conditional access system. Specifically, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee method to receive a request for a service from a requestor over a bi-directional channel, authenticate the requestor using information from the request, and transmit the monthly key to the requestor over the bi-directional channel, as taught by Wasilewski. The motivation for doing so would have been to permit a set-top box to send a message to the service provider, thereby permitting various interactive services.

Regarding claim 8, Wasilewski further discloses that the bidirectional channel is one of a wireless network (col. 4, lines 41-43; col. 5, lines 5-9).

Regarding claims 13 and 29, Wasilewski further discloses that authentication is performed using a user ID and a PIN, which meets the limitation of a password (col. 4, lines 45-53).

Regarding claims 14-15 and 30-31, Wasilewski further discloses authenticating the requestor using a public key encryption scheme



associated with the IP address of the requestor (col. 34, lines 13-44; col. 42, line 59 – col. 43, line 12)

Regarding claim 20, Lee does not disclose retransmitting the second decryption information over the unidirectional channel. Wasilewski discloses retransmitting second decryption information over a unidirectional channel (col. 4, lines 34-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee method further to retransmit the second decryption information over the unidirectional channel, as taught by Wasilewski, so that it would be immediately available to any new viewer.

Regarding claim 33, Lee further discloses determining the correct key for decrypting the service after a loss of service (col. 4, lines 50-56).

Regarding claim 34, when the subscriber does not have the correct monthly key (i.e., not a paid subscriber), inherently, the subscriber must contact the system in order to receive the current monthly key.

13. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Wasilewski as applied to claim 8 above, and further in view of Vieweg et al (6,748,082). Wasilewski discloses that the bidirectional channel is one of a wireless network; however, Wasilewski does not disclose that the wireless network is a GSM network. Vieweg discloses using a GSM network

(col. 2, line 66 – col. 3, line 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined method of Wasilewski and Lee to use a GSM network, as taught by Vieweg. It is particularly simple, and, in terms of automatization ability, efficient for transmission to be in the form of a digital mobile radio short message like GSM-SMS (col. 2, lines 45-50).

14. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Wasilewski as applied to claim 8 above, and further in view of Gulcu et al (6,925,562). Wasilewski discloses that the bidirectional channel is one of a wireless network; however, Wasilewski does not disclose that the wireless network is a Bluetooth network. Vieweg discloses using a Bluetooth network (col. 2, lines 6-27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined method of Wasilewski and Lee to use a Bluetooth network, as taught by Gulcu. Bluetooth technology would allow users to connect a wide range of devices easily and quickly, without the need for cables, expanding communications capabilities for mobile devices.

15. Claims 12 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Wasilewski as applied to claim 1 above, and

further in view of Raith (6,510,515). Wasilewski does not disclose that the authentication is performed using a SIM card number. Raith discloses performing authentication using a SIM card number in a conditional access system (col. 1, line 60 – col. 2, line 10; col. 11, lines 37-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined method of Wasilewski and Lee such that the authentication is performed using a SIM card number, as taught by Raith, in order to allow the system to verify the SIM card.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dinh whose telephone number is 571-272-3802. The examiner can normally be reached on Mon-Fri: 10:00am-6:30pm.

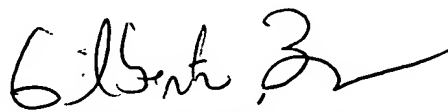
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MD

Minh Dinh  
Examiner  
Art Unit 2132

3/20/07

  
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